

This listing of the claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently amended) A method of forming a microelectronic structure comprising:
 - forming a first thickness of an epitaxial germanium layer on a sacrificial silicon layer;
 - forming a targeted device layer thickness by removing a predetermined amount of the epitaxial germanium layer to form a targeted second thickness of the epitaxial germanium layer;
 - activating the epitaxial germanium layer and an oxide layer disposed on a silicon substrate in an oxygen plasma; and
 - bonding the activated epitaxial germanium layer to the oxide layer.
2. (Original) The method of claim 1 wherein bonding the epitaxial germanium layer to an oxide layer disposed on a silicon substrate comprises forming a germanium oxide interface between the epitaxial germanium layer and the oxide layer.
3. (Original) The method of claim 1 wherein forming the first thickness of the epitaxial germanium layer on the sacrificial silicon layer comprises forming a graded buffer layer on a sacrificial silicon layer and then forming a first thickness of the germanium layer on the graded buffer layer.

4. (Original) The method of claim 1 wherein removing a predetermined amount of the first thickness of the epitaxial germanium layer to form a second thickness of the epitaxial germanium layer comprises polishing a predetermined amount of the first thickness of the epitaxial germanium layer by chemical mechanical polishing to form a second thickness of the epitaxial germanium layer.

5. (Original) The method of claim 4 wherein polishing a predetermined amount of the first thickness of the epitaxial germanium layer by chemical mechanical polishing to form a second thickness of the epitaxial silicon germanium layer comprises polishing a predetermined amount of the first thickness of the epitaxial germanium layer by chemical mechanical polishing to form a surface roughness in a second thickness of the epitaxial germanium layer of about 5 angstroms or less.

6. (Previously presented) The method of claim 1 wherein bonding the epitaxial germanium layer to the oxide layer comprises bonding the epitaxial germanium layer to the oxide layer to form a composite substrate.

7. (Original) The method of claim 1 wherein activating the epitaxial germanium layer and an oxide layer disposed on a silicon substrate in an oxygen plasma comprises activating the epitaxial germanium layer and an oxide layer disposed on a silicon substrate, wherein the oxide layer is about 1,000 angstroms in thickness, in an oxygen plasma.

8. (Original) The method of claim 1 wherein removing a predetermined amount of the first thickness of the epitaxial germanium layer to form a second thickness of the epitaxial germanium layer comprises removing a predetermined amount of the first thickness of the epitaxial germanium layer at a rate of less than about 10 angstroms per minute to form a second thickness of the epitaxial germanium layer.

Claims 9-23 (canceled).